REMARKS

This preliminary amendment serves to incorporate amendments to the specification made during the prosecution of the parent application.

No new matter is added.

Early and favorable examination on the merits is respectfully requested.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By: ______________________

Thomas J. Kowalski
Reg. No. 32,147
Samuel H. Megerditchian
Reg. No. 45,678
(212) 588-0800

PATENT
674556-2003.1

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Page 1, above "FILM OR COATING DEPOSITION AND POWDER FORMATION":

--TITLE OF THE APPLICATION--

Page 1, fifth paragraph:

However, none of these techniques has been found to provide good control of the stoichiometry, morphology, microstructure and [electrical] properties of multicomponent oxide films and a relatively high growth rate and deposited area of a deposited film. Also the CVD and PVD techniques tend to need expensive equipment and highly skilled technicians for effective operation.

Page 3, paragraph 8:

[The apparatus may also comprise a container capable of enclosing at least said substrate and said outlet, such that other gaseous reactants may be supplied for reaction with said coating solution.]

Page 15, second full paragraph:

Figures 9a and 9b are schematic diagrams showing dipole orientation in polymer films produced by the two process variants, process I and process II. These illustrate that under process II a PVDF film with oriented β-phase crystal is obtained, which is very important for getting good piezoelectricity and pyroelectricity in PVDF film.

Page 16, second full paragraph:

The present results also clearly revealed the potential[s] of this technique to deposit polymer thin film of good quality with [a] very simple equipment. This technique can be used in

the fabrication of a wide range or polymer films, including polar and conductive polymer/or co-polymer coatings, such as PVDF, PTFE, polyanilines, and polypyrrole etc.

Page 16, third full paragraph:

Figure 10 illustrates a third embodiment of a deposition apparatus. IN many respects, the apparatus of Figure 10 is similar to that of Figure 4, but for the addition of deflectors 210 under the control of a deflection controller 200 <u>(components analogous to those in Figures 1 and 4 are similarly numbered in Figure 10, with the use in Figure 10 of a prime (') or double prime (") after the number)</u>.

Page 18, second paragraph:

Figures 13 and 14 show the microstructures of YSZ nanopowders at different reaction temperatures. In the nanopowder formation process, the YSZ aerosol is produced by electrostatic assisted spray, and delivered into the reaction zone in a CVD reactor chamber, with the fin[d]<u>e</u> droplets of aerosol being converted into dry gel and pyrolyzing to form the nanopowders on[to] <u>the</u> cold substrate under an appropriate low temperature. TEM micrographs reveal that the distribution of YSZ nanoparticles is uniform and the average size of YSZ powders deposited at 500°C is 10-20 nm (Figure 13). Under the high reaction temperature (e.g. 800°C), particle cluster aggregation occurs. TEM micrographs revel that the distribution of YSZ nanoparticles is not uniform, and the YSZ particle size is in the range of 30-80 nm at high temperatures (Figure 14).